

Please amend the claims as follows:

**Listing of Claims:**

- 1 1. (original): A perpendicular magnetic head, comprising:
  - 2 a first magnetic pole having a portion thereof that is exposed at an air bearing surface
  - 3 (ABS) of the magnetic head;
  - 4 a second magnetic pole including a pole tip thereof that is exposed at said ABS;
  - 5 a heating element being disposed between said first magnetic pole and said pole tip;
  - 6 an induction coil layer that is disposed between said first magnetic pole and said second
  - 7 magnetic pole.
  
- 1 2. (original): A perpendicular magnetic head as described in claim 1 wherein said heating
- 2 element is disposed between said induction coil and said pole tip.
  
- 1 3. (original): A perpendicular magnetic head as described in claim 1 wherein said second
- 2 magnetic pole includes a shaping layer that is disposed in magnetic flux communication with
- 3 said first magnetic pole, and a probe layer which includes said pole tip, wherein said probe layer
- 4 is disposed in magnetic flux communication with said shaping layer.
  
- 1 4. (withdrawn): A perpendicular magnetic head as described in claim 3 wherein said
- 2 shaping layer is disposed between said heating element and said pole tip.
  
- 1 5. (original): A perpendicular magnetic head as described in claim 3 wherein said probe layer is
- 2 disposed between said heating element and said shaping layer.

1 6. (withdrawn): A perpendicular magnetic head, comprising:  
2       a read head element;  
3       a first magnetic pole having a pole tip portion thereof that is exposed at an air bearing  
4       surface (ABS) of the magnetic head;  
5       a second magnetic pole including a portion thereof that is exposed at said ABS;  
6       a heating element being disposed between said read head element and said pole tip; and  
7       an induction coil layer that is disposed between said first magnetic pole and said second  
8       magnetic pole.

1 7. (withdrawn): A perpendicular magnetic head as described in claim 6 wherein said first  
2       magnetic pole includes a shaping layer that is disposed in magnetic flux communication with  
3       said second magnetic pole, and a probe layer which includes said pole tip, wherein said probe  
4       layer is disposed in magnetic flux communication with said shaping layer.

1 8. (withdrawn): A perpendicular magnetic head as described in claim 7 wherein said  
2       shaping layer is disposed between said heating element and said pole tip.

1 9. (original): A hard disk drive including a perpendicular magnetic head, comprising:  
2       a media disk being adapted for rotation in a first direction;  
3       said magnetic head including:  
4       a write head element including a magnetic pole having a pole tip portion thereof that is  
5       exposed at an air bearing surface (ABS) of the magnetic head, and disposed to write magnetic  
6       bits to portions of said media disk;

7           a heating element being disposed proximate said pole tip, such that said heating element  
8    is disposed to heat said portions of said magnetic disk prior to the writing of said magnetic bits to  
9    said portions of said media disk.

1    10.    (currently amended): A hard disk drive as described in claim 9, wherein said magnetic  
2    head includes ~~a second~~ another magnetic pole having a portion thereof that is exposed at said  
3    ABS;

4           an induction coil that is disposed between said ~~first~~ magnetic pole and said ~~second~~  
5    another magnetic pole, and

6           wherein said heating element is disposed between said induction coil and said pole tip.

1    11.    (currently amended): A hard disk drive as described in claim 10 wherein said ~~second~~  
2    magnetic pole includes a shaping layer that is disposed in magnetic flux communication with  
3    said ~~first~~ another magnetic pole, and a probe layer which includes said pole tip, wherein said  
4    probe layer is disposed in magnetic flux communication with said shaping layer.

1    12.    (withdrawn): A hard disk drive as described in claim 11 wherein said shaping layer is  
2    disposed between said heating element and said pole tip.

1    13.    (original): A hard disk drive as described in claim 11 wherein said probe layer is  
2    disposed between said heating element and said shaping layer.

1    14.    (withdrawn): A hard disk drive as described in claim 10 wherein said first magnetic pole  
2    includes a shaping layer that is disposed in magnetic flux communication with said second

3 magnetic pole, and a probe layer which includes said pole tip, wherein said probe layer is  
4 disposed in magnetic flux communication with said shaping layer.

1 15. (withdrawn): A hard disk drive as described in claim 14 wherein said shaping layer is  
2 disposed between said heating element and said pole tip.

1 16. (withdrawn): A method for fabricating a perpendicular magnetic head, comprising:  
2 fabricating a first magnetic pole upon a layer of the magnetic head, wherein a portion of  
3 said first magnetic pole is exposed at an air bearing surface (ABS) of said magnetic head;  
4 fabricating a second magnetic pole in magnetic flux communication with said first  
5 magnetic pole such that a pole tip portion of said second magnetic pole is exposed at said ABS;  
6 fabricating an induction coil between said first magnetic pole and said second magnetic  
7 pole;  
8 fabricating a heating element within said magnetic head prior to fabrication of said  
9 second magnetic pole.

1 17. (withdrawn): A method for fabricating a perpendicular magnetic head as described in  
2 claim 16, wherein said step of fabricating said second magnetic pole includes the steps of  
3 fabricating a probe layer that includes said pole tip, and fabricating a shaping layer portion of  
4 said second magnetic pole upon said probe layer, wherein said shaping layer is formed in  
5 magnetic flux communication with said first magnetic pole.

1 18. (withdrawn): A method for fabricating a perpendicular magnetic head as described in  
2 claim 16, wherein said step of fabricating said second magnetic pole includes the steps of:

3            fabricating a shaping layer portion of said second magnetic pole and wherein said  
4        shaping layer is formed in magnetic flux communication with said first magnetic pole, and  
5            forming a probe layer upon said shaping layer in magnetic flux communication therewith,  
6        and wherein said pole tip is formed as a part of said probe layer.

1        19. (withdrawn): A method for fabricating a perpendicular magnetic head, comprising:  
2            fabricating a first magnetic pole upon a layer of the magnetic head, wherein a pole tip  
3        portion of said first magnetic pole is exposed at an air bearing surface (ABS) of said magnetic  
4        head;  
5            fabricating a second magnetic pole in magnetic flux communication with said first  
6        magnetic pole such that a portion of said second magnetic pole is exposed at said ABS;  
7            fabricating an induction coil between said first magnetic pole and said second magnetic  
8        pole;  
9            fabricating a heating element within said magnetic head prior to fabrication of said first  
10      magnetic pole.

1        20. (withdrawn): A method for fabricating a perpendicular magnetic head as described in  
2        claim 19, wherein said step of fabricating said first magnetic pole includes the steps of  
3        fabricating a probe layer that includes said pole tip subsequent to fabricating said heating  
4        element, and fabricating a shaping layer portion of said first magnetic pole upon said probe layer.

1        21. (withdrawn): A method for fabricating a perpendicular magnetic head as described in  
2        claim 19, wherein said step of fabricating said first magnetic pole includes the steps of:

3            fabricating a shaping layer portion of said first magnetic pole and wherein said shaping  
4    layer is formed in magnetic flux communication with said second magnetic pole, and  
5            forming a probe layer upon said shaping layer in magnetic flux communication therewith,  
6    and wherein said pole tip is formed as a part of said probe layer.